

# Instruction Manual the UT-66XX Series Serial Server

## Table of Contents

Chapter 1 General data on UT-66XX series serial server.....	4
a) Product introduction.....	4
b) Main features.....	4
c) Application mode.....	6
Chapter 2 Instruction on installation of UT-66XX series serial server.....	7
a) Instruction on software installation.....	7
b) Description of LED indicators.....	7
c) Definition of pins.....	8
Chapter 3 echnical parameters of UT-66XX series serial server.....	9
a) Technical parameters.....	9
b) Product Configuration Table .....	10
Chapter 4 Description of WEB operation of UT-66XX series serial server.....	11
a) Server Menu.....	11
b) Serial Port Communication Settings.....	11
c) Working mode.....	12
d) Authority Management.....	18
e) System Stats.....	18
f) Miscellaneous.....	19
Chapter 5 Troubleshooting of UT-66XX series serial server.....	19
a) Can't find the IP address of the serial server after running upgrad.exe.....	19
b) Unable to open a serial port.....	19
c) Can't receive/send data.....	19
d) Forget the password previously set.....	19
e) Lousy code received/sent.....	20
f) The serial communication server is used as the dialing server and the connection is established normally. But it can't be open by a PC using IE, while inputting the IP in the address bar will do.....	20
g) The serial communication server is used as a dialing server and the connection is established normally. But it can't be open fully or at all when using IE for complicated pages or downloading of large files.....	20
h) Unsuccessful PPP connection.....	20
i) Can't be connected as a TCP server.....	20
Chapter 6 Accessories.....	21
a) Modification of IP address.....	21
b) Creation of virtual serial port.....	21

## Chapter 1 General data on UT-66XX series serial server

### a) Product Introduction

The UT-66XX series serial communication server, also called - terminal server or serial server, is a converter between the asynchronous serial port RS232/422/485 and Ethernet, which is an independent intelligent device with a CPU, an embedded OS and a complete TCP/IP protocol stack. The device is used for transparent and bidirectional data transmission between the RS232/422/485 and Ethernet, and for enabling the instant connection to the network of the RS232/422/485 serial device.

Product features: Supports both dynamic IP (DHCP) and static IP, supports both gateway and proxy server, able to transmit data through the Internet; Provides transparent and bidirectional data transmission, able to convert serial port to TCP/IP without any additional modification to the existing system made by the user; Internally integrated protocols: ARP, IP, TCP, HTTP, ICMP, SOCKET, UDP; Full English interface for all programs, wizards are easy to use even for new computer users.

UT-66XX series serial server includes the following models



UT-6601 single port  
serial server



UT-6602 dual port  
serial server



UT-6604 quad port  
serial server



UT-6608 8-port serial  
server



UT-6616 16-port serial  
server



UT-6632 32-port serial  
server

### b) Main features

#### Hardware features

- ☆ English menus of configuration interface with the various operation modes, able to meet the application demand of different industries;
- ☆ Virtual COM drive software for Windows;
- ☆ Flexible and reasonable Fixedtty working scheme under UNIX;
- ☆ 1, 2, 4, 8, 16, or 32 serial ports to connect the various serial devices, including terminals, Modems, barcode machines, cash receivers, ISDNs, terminal adapters, serial printers and PCs, etc., able to support the remote control function;
- ☆ Reset key is provided for the force reset after a system crash;
- ☆ A 10/10M self-adaptive Ethernet port with possibility of manual configuration;
- ☆ Complete signal is provided for each serial port, including DCD, RXD, TXD, DTR, DSR, TRS, CTS, GND;
- ☆ Powerful whole performance with the embedded 100M 32bit CPU and 8M RAM;

☆ Independent indicator for each network port and serial port for convenient indication of working status;

### **Software features**

★ Supported protocols include ARP, IP, ICMP, UDP, TCP, PPP, HTTP, TELNET, DNS, DHCP, PAP, CHAP, etc.

★ Supports extended serial port mode under Windows

Complete extended serial port (com) drive based on the Windows platform, and simple and easy-to-use management programs under the Windows platform. Up to 1024 serial ports under the WindowsNT/Windows2000/WindowsXP, with each serial port of the UT-66XX series serial server to be mapped as the local COM port of the Windows host PC. Operation of these ports is similar to operation of the local COM ports on the host, plus, any existing software or communication module of the original device can be used directly without any change.

★ Supports the UNIX host login mode

The present mode is used by the terminal device to login to the Linux/Unix host, where each serial port supports up to 8 virtual displays. All the displays support both the Telnet or Fixtty login, and can choose to login a different host or the same host.

Allows communication with different hosts using the same terminal, enabling the single user, single terminal and multi- mission operation. The Fixedtty drive is provided for SCO Unix/Linux/Unixware under fixed port mode (Fixtty). No extra configuration work is required on the host, except the installation of the drive program. All the configuration is done on the terminal server, through this way the cleanness of the host system is ensured and the operation of the terminal server won't be affected by other accidental actions.

In addition, any name started with "tty" can be assigned to each login terminal by the user under the fixed port mode, which is more convenient for management and easier for troubleshooting.

★ Supports PPP serial mode

All the ports of the UT-66XX series serial server support the PPP protocol, and can be used other as a PPP server end or as a client end after configuration.

★ Features routing function

Allows configuration of multiple static routes inside the server.

★ Supports DNS for domain service

Allows query of the required IP address for analysis when connecting a machine.

★ Supports ARP

The UT-66XX series serial server supports the standard ARP protocol.

★ Parameters of configuration of terminal server

Connection to the terminal server through the web to perform the configuration, by doing this the user can use the UT-66XX series serial server in work conveniently.

★ Supports software update function

The UT-66XX series serial server supports free software update to protect the investment of the user.

★ Supports status monitoring

Not only indicators are provided on the UT-66XX series serial server for the analysis of the working status of the server, but also statistics of the input/output data of each network port and serial port, as well as various information, are provided for the analysis of the user.

★ Supports MODEM connection

The UT-66XX series serial server supports MODEM plug in/out.

### Security features

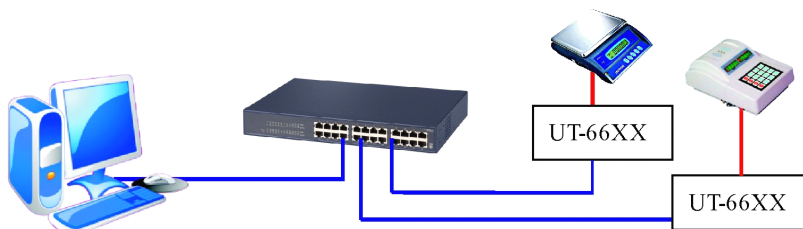
The UT-66XX series serial server adopts the following security schemes to ensure the safe use of the product by the user.

- ☆ Allows setting a server administrator password, where only the system administrator is allowed to manage the terminal server, eliminating the arbitrary modification to the UT-66XX series serial server by unauthorized personnel. Thus the security of the configuration of the UT-66XX series serial server is ensured.
- ☆ Possible to limit the host name the port is about to login, so host users without registration will not be able to access the server, so the secure access to the server is ensured.
- ☆ Since the UT-66XX series serial server is connected to network during operation, the server is PPP certified (support PAP and CHAP certification) to ensure the security of the server during the network access;
- ☆ Possible to pose limits to the hosts or network segments allowed to access the server, the unauthorized objects not registered in the hosts list and the network segment will not be able to pass the network access server;

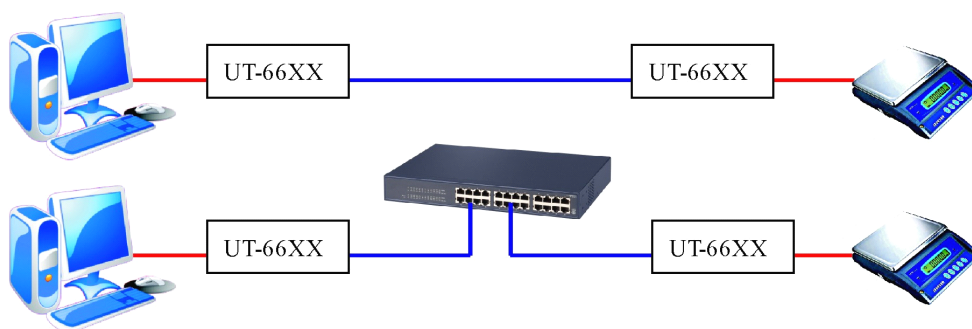
The ex-factory IP address of the UT-66XX series serial server is 192.168.1.125, and the subnet mask is 255.255.255.0

### c) Application mode

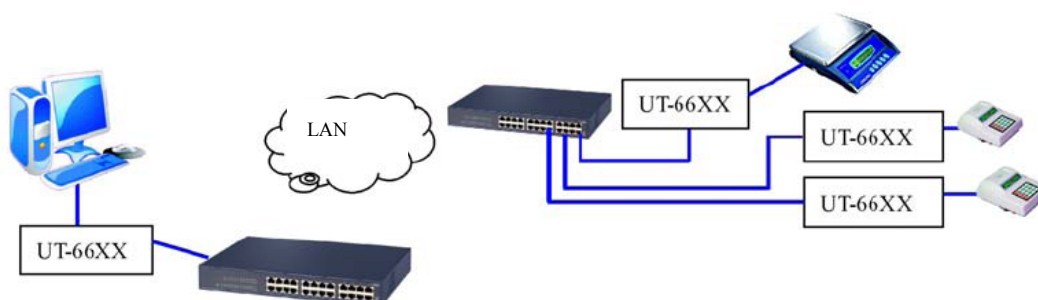
#### 1. Virtual serial mode



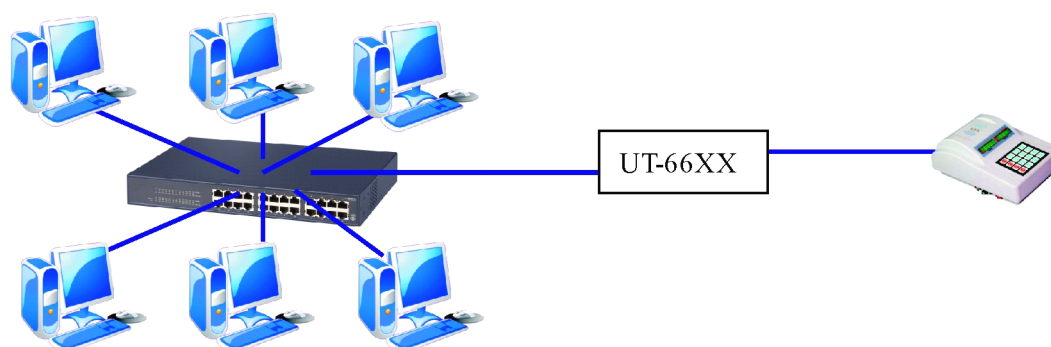
#### 2. Point-to-point mode



#### 3. Point-to-multipoint mode



#### 4. Multi-host mode (up to 6 hosts)



## Chapter Two Instruction on installation of UT-66XX series serial server

### a) Instruction on software installation

#### 1. IP address search and software modification

[See the annexes for details](#)

#### 2. Virtual serial software

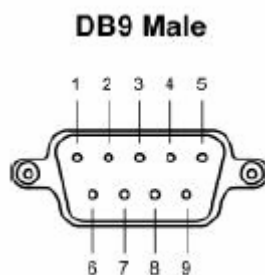
[See the annexes for details](#)

### b) Description of LED indicators

Sequence Model	First	Second	Third	Fourth	Fifth
UT-6601	● Power	● 10/100M	● Network connection		
UT-6602	● 10/100M	● Network connection	● Power	● 1 indicator for serial port status	● 2 indicators for serial port statuses
UT-6604	● 10/100M	● Network connection	● Power		
UT-6608	● 10/100M	● Network connection	● Power		
UT-6616	● Power	● Network connection	● 10/100M	● Network full/half duplex indicator	
UT-6632	● Power	● Network connection	● 10/100M	● Network full/half duplex indicator	

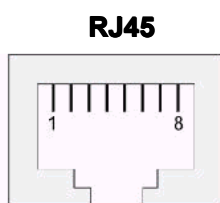
### c) Definition of pins

#### 1. Definition of serial pins for UT-6601



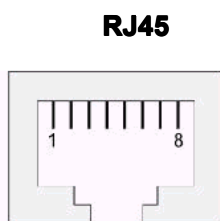
PIN	RS-232	RS-485 HALF	RS-485 FULL	RS-422
1	DCD	DATA+	TXD+	TXD+
2	RXD	DATA-	TXD-	TXD-
3	TXD		RXD+	RXD+
4	DTR		RXD-	RXD-
5	GND			
6	DSR			
7	RTS			
8	CTS			

#### 2. Definition of serial pins for UT-6602



RJ45	RS-232	RS-485 HALF	RS-485 FULL	RS-422
1	TxD	DATA+	TxD+	TxD+
2	RxD	DATA-	TxD-	TxD-
3	RTS		RxD+	RxD+
4	CTS		RxD-	RxD-
5	DSR			
6	GND	GND	GND	GND
7	DTR			
8	DCD			

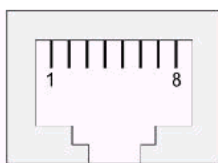
#### 3. Definition of the UT-6604/6608 serial pins



RJ45	RS-232	RS-485 HALF	RS-485 FULL	RS-422
1	TxD	DATA+	TxD+	TxD+
2	RxD	DATA-	TxD-	TxD-
3	RTS		RxD+	RxD+
4	CTS		RxD-	RxD-
5	DSR			
6	GND	GND	GND	GND
7	DTR			
8	DCD			

#### 4. Definition of the UT-6616/6632 serial pins

RJ45	RS-232	RS-485 HALF	RS-485 FULL	RS-422
5				
1	TxD	DATA+ <sup>1</sup> Merge <sub>2</sub>	RxD+ 1	RxD+ 1
2	RxD		TxD+ 2	TxD+ 2

**RJ45**

3	RTS	DATA $\begin{matrix} 3 \\ 4 \end{matrix}$ Merge	RxD- 3	RxD- 3
4	CTS		TxD- 4	TxD- 4
5	DSR		FULL 5	FULL 5
6	GND	GND 6	GND 6	GND 6
7	DTR			
8	DCD			

**Chapter Three Technical parameters of UT-66XX series serial server****a) Technical parameters**

Product model		UT-6601	UT-6602	UT-6604	UT-6608	UT-6616	UT-6632
Number of serial ports		1	2	4	8	16	32
CPU		32bits 100MHZ					
Memory		2M	2M	8M	8M	8M	8M
Serial port	Baudrate	50-460800bps					
	Parity bits	None、Odd、Even、Mark、Space					
	Data bits	5、6、7、8					
	Stop bits	1、1.5、2					
	Flow control	RTS/CTS、XON/XOFF					
	Type	DB9/terminal	RJ45				
	Protection	15KV lightning protection					
	Signal	RS232: DCD/RxD/TxD/DTR/GND/DSR/RTS/CTS、RS422: TXD+/RXD+/TXD-/RXD-/GND、RS485: Data+/Data-					
Network port	Rate	10/100M self-adaptive, support manual configuration					
	Type	RJ45					
	Protection	2KV built-in electromagnetic insulation					
Software	Protocol	ARP、IP、ICMP、UDP、TCP、PPP、HTTP、TELNET、DNS、DHCP、PAP、CHAP					
	Virtual COM	Windows NT/2000/XP					
Environment	Operating Temperature	-10℃————60℃					
	Working humidity	5%————95%					
	Storage temperature	-20℃————85℃					

	<b>Storage humidity</b>	<b>5% — 95%</b>			
<b>Certification</b>		<b>FCC、CE</b>			
<b>Power supply</b>		<b>DC 5V、1A</b>			<b>AC 220V</b>
<b>Appearance</b>	<b>Material</b>	<b>Metal housing</b>			
	<b>Dimensions</b>	<b>97×65×0.87in</b>	<b>113×77×0.91in</b>	<b>160×90×1.18in</b>	<b>Standard 19 inch, 1U of height</b>

**b) Product Configuration Table (for one set of equipment)**

Configuration Model	Serial server host	Power supply adapter	Software	Product manual and warranty sheet	RJ45 to DB9 male cable
UT-6601 (3 in 1)	1	1 DC5V/1A	1	1	
UT-6602 (2 channels of RS232)	1	1 DC5V/1A	1	1	1
UT-6602 (2 channels of RS485/422)	1	1 DC5V/1A	1	1	
UT-6604 (3 in 1)	1	1 DC5V/1A	1	1	1
UT-6608 (3 in 1)	1	1 DC5V/1A	1	1	1
UT-6616 (16 channels of RS232)	1	AC220V cable	1	1	1
UT-6616 (16 channels of RS485/422)	1	AC220V cable	1	1	
UT-6632 (32 channels of RS232)	1	AC220V cable	1	1	1
UT-6632 (32 channels of RS485/422)	1	AC220V cable	1	1	



## Chapter Four: Description of WEB operation of UT-66XX series serial server

### a) Server Menu

Server Menu--Server Information (setting of server information)

Server Name	Serial server name.
Server Position	Serial server position (can be user-defined (such as name of the installation position) for convenient maintenance).
Ethernet IP Address	Serial server internal IP address
Ethernet IP Mask	Internal network subnet mask .
Ethernet Mode	Network rate can be manually set to 10M or 100M, the default option is auto - detecting the network rate automatically.
DHCP Enabled	Enables the automatic IP configuration.
DHCP CLIENT ID	If the Ethernet is to be used as the DHCP client, then this option is to be input to the CLIENT ID of the DHCP (in hexadecimal format) .
Default Gateway	Gateway
Primate DNS Server	The primary DNS server.
Second DNS Server	The secondary DNS server.
CONSOLE Timeout	Console time out (access the serial server via the console port)
Boot Host	Extension option (starting the host)
Boot File	Extension option (import files)
Submit	Submit (the above options of the serial ports must be submitted to complete the settings)

### b) Serial Port Communication Settings

Serial Port Communication Settings---Port (communication settings of the serial ports)

Baudrate	Baudrate of the serial port (should be consistent in value with the baudrate of the serial device connected )
Type of Connection	Type of the serial port (including RS232/485/422)
Data Bits	Data bits (The default is 8, and the actual value should be consistent with the device connected)
Stop Bits	Stop bits (The default is 8, and the actual value should be consistent with the device connected)
Parity	Parity bits (Including Nove, Even, Odd, Mark, and Space. The default is N, and the actual

	value should be consistent with the device connected.)
Flow Control	Flow control
FIFO	First in first out (enabled for default)
Lock	Locking configuration (possible to lock the configuration of the port for the convenient repeated setting in future days)
tXON	
tXOFF	
TX Empty	
Del String	
RX Freetime	RX idle time
RX Max Length	RX maximum length
TX Block Time	TX block time
XANY	
DTR ON	DTR is a hardware based control mode of flow control, where you can decide if it is necessary to set a data terminal ready signal for you application.
Keepalive	Keepalive time (configure the keepalive time of the ports of the terminal server, the range is between 0-10000s, 0 for no keepalive work)
Baud Adjust	Fine adjustment of the baudrate
Advanced Setting	Extension options
Submit	Submit (to complete the setting, after configuration of the above options you need to click on the submit button, and then click on "Reset ports", select "port1" and click on the "Submit" button to submit)
Apply to all ports	Apply to all ports (this option can be checked if all ports are of the same settings)

### c) Working mode

TCP realport (TCP/IP virtual serial mode)

TCP realport works in Windows environment to map ports of a serial server as virtual COM ports of the local host through drive program, enabling the COM based upper end software to use the serial ports just like real local COM ports without any modification of the software. The drive program supports an extension of COM1024 for the most. Moreover, each independent port supports multiple sessions (up to 6 connections), which makes the monitoring of the serial devices more flexible and more convenient. In addition, the multiple connections resource can be used as a connection backup.

Communication Mode	Operation mode option
Sessions	Number of hosts connected to the device (up to six)
Authentication	Authentication

Submit	Submit (the above options of the serial ports must be submitted to complete the settings)
Apply to all ports	Apply to all ports (this option can be checked if all ports are of the same settings)

#### Udp realport (UDP virtual serial mode)

Communication Mode	Operation mode option
Host Address	Host address
Submit	Submit (the above options of the serial ports must be submitted to complete the settings)
Apply to all ports	Apply to all ports (this option can be checked if all ports are of the same settings)

#### TCP/IP socket (WINSOK mode)

Communication Mode	Working mode option
TCP Data Mode	There are two parameters for the TCP data mode: [raw] and [telnet], the first is for fully transparent transmission, and the second means that the socket data is in accordance with TELNET and RFC2217 standard. Control code is added to the data received by the server from the serial ports and then sent to other nodes in the Ethernet through socket.
Local Port	Port number (default as 1001, 1002...)
CR As	There are four parameters: [none], [cr], [lf], and [cr-lf]. [none] means that the server will not send an "ENTER" received from a serial port to the Ethernet; [cr] means that the server will send an "ENTER" received from a serial port to the Ethernet just as it is; [lf] means that the server will change an "ENTER" received from a serial port to a "NEW LINE" and then send it to the Ethernet; [cr-lf] means that the server will change an "ENTER" received from a serial port to an "ENTER" and a "NEW LINE" and then send them to the Ethernet.
LF As	There are four parameters: [none], [cr], [lf], and [cr-lf]. [none] means that the server will not send an "ENTER" received from a serial port to the Ethernet; [cr] means that the server will send an "ENTER" received from a serial port to the Ethernet just as it is; [lf] means that the server will change an "ENTER" received from a serial port to a "NEW LINE" and then send it to the Ethernet; [cr-lf] means that the server will change an "ENTER" received from a serial port to an "ENTER" and a "NEW LINE" and then send them to the Ethernet.
Sessions	Number of hosts connected to the device (up to six)
Strip NULL	
Authentication	It is possible that the server send a request for authentication when connected, the connection will be cancelled if the user's name and the password are incorrect. This

	configuration option has two parameters: [none] and [local]. <i>Note: If [local] is selected for the authentication, the users should be added correspondingly, and it is possible to set the operation authority of the users to the serial ports; if no user is added, the [authentication] set is invalid, which means that the connection will be permitted to be established even the input user name and password don't exist.</i>
Auth Prompt	If this option is set to yes, a login hint will show up when connecting the server: (Login: and Password)
SERVER First	Server priority status
Used as a TCP client	
Peer Host	The IP address pointing to the server end
Peer Port	The port number pointing to the server end
Connect	Issuing a connect includes four situations: [always], [char], [dcdon], and [dsron]: [always] means that the server starts a connection at power up and reconnects immediately if the connection is broken; [char] means that the server starts a connection as soon as the corresponding port receives the data; [dcdon] means that the server starts a connection when DCD of the corresponding serial RS-232 port is set to a high value; [dsron] means that the server starts a connection when DSR of the corresponding serial RS-232 port is set to a high value;
Disconnect	Issuing a disconnect includes four situations: [none], [dcdoff], [dsroff], and [break]: <b>[none]</b> means that the server will never try to disconnect; <b>[dcdoff]</b> means that the server disconnect when DCD of the corresponding serial RS-232 port is set to a lower value from a higher value; <b>[dsroff]</b> means that the server disconnect when DSR of the corresponding serial RS-232 port is set to a lower value from a higher value; <b>[break]</b> means that the server disconnect when the corresponding serial RS-232 port receives a break message.
Freetime	Idle time (To set the idle time before automatic disconnection, the server will disconnect if there is no data transmission in the time period (in second) set. If the value is set to "0", the server will never try to disconnect no matter how long the idle time is.)

Server Menu

- Server Information
- Serial Port Communication Settings
  - Mode
    - Port1
  - Route Table
  - Host Table
- Authority Management
  - Users
- System Stats
  - Reset Ports
  - Save Configurations
  - Reboot Server

### Port 1 Mode Setting

Communication Mode: TCP/UDP Socket

TCP Data Mode: raw

CR As: cr

Sessions: 1

Authentication: none

SERVER First: no

Local Port: 10001

LF As: lf

Strip NULL: no

Auth Prompt: no

Session	Protocol	Peer Host	Peer Port	Connect	Disconnect	Freetime
1	TCP server			always	none	
2	TCP server			always	none	
3	TCP server			always	none	
4	TCP server			always	none	
5	TCP server			always	none	
6	TCP server			always	none	

Submit

### Multi screens TTY

The server can use this mode as a char terminal, which is common in financial industry. This mode

supports two protocols: telnet and rtelnet. Telnet doesn't need any drive program, but the terminal name it receives when login to the system is not fixed; rtelnet uses drive program to login to the same terminal for each time, thus the terminal name is fixed.

Communication Mode	Operation mode
Screens	Number of screens (each serial port supports up to 6 screens) (UT-66XX supports multi-screen switching)
Term Type	Terminal type (Here the user can enter the type of the terminal simulation to adapt to the handling of special characters)
Auto Connect	Automatic connection (There are two options: [cr] and [auto], [cr] will connect to the host when the "ENTER" button on the terminal is pressed, and [auto] will connect to the host at power up)
Logoff	Disconnection conditions (there are four options: [none], [dcdoff], [dsroff], and [break]. [none] means that the server will never try to disconnect; [dcdoff] means that the server disconnect when DCD of the corresponding serial RS-232 port is set to a lower value from a higher value; [dsroff] means that the server disconnect when DSR of the corresponding serial RS-232 port is set to a lower value from a higher value; [break] means that the server disconnect when the corresponding serial RS-232 port receives a break message.)
Prompt	Prompt message (The actions and status of the current connection will be displayed on the terminal when connection is established between the server and the UNIX host.)
MODEM Mode	MODEM configuration (This option has three parameters: [none], [in] and [out]. [none]: MODEM control is invalid; [in]: MODEM is waiting for dial in; [out]: MODEM dials out according to the setting of [Telephone numbers])
Dynamic Dial	Dynamic dialing (There are two options. "no" means that the server will only dial the number provided in [Telephone number 1], when [MODEM mode] is "out"; "yes" means that when [MODEM mode] is "out", the server will dial the number provided in [Telephone number 1] at first. If it can't be connected, the number in [Telephone number 2], [Telephone number 3], and [Telephone number 4] will be dialed sequentially until it is connected or the handshaking with the counterpart MODEM is successful.)
MODEM Init Command	The Modem initialization command
MODEMDial Command	The Modem dialing command
Phone Number1	Telephone number 1
Phone Number2	Telephone number 2
Phone Number3	Telephone number 3
Phone Number4	Telephone number 4
Callback	To call back.
Callback Phone	The callback telephone number.

**Port 1 Mode Setting**

Communication Mode: Multi screens TTY

Screens: 1

Auto Connect: cr

Prompt: yes

MODEM Mode: none

MODEM Init Command:

Phone Number1:

Phone Number3:

Callback: no

Term Type: vt100

Logoff: none

Dynamic Dial: no

MODEM Dial Command:

Phone Number2:

Phone Number4:

Callback Phone:

Screen	Mode	Host	Switch Code	Ack Code	Print Init Code
1	telnet				
2	telnet				
3	telnet				
4	telnet				
5	telnet				
6	telnet				

Screen	Username Script	Username	Password Script	Password
1	gin:		ord:	
2	gin:		ord:	

### PPP dialout

In this mode, each serial port of the server can be used as the dial in/out end of the PPP server, it supports applications of remote dialing access

Communication Mode	Operation mode
Peer IP	The IP address of the peer (Used as the IP address of the peer serial port after the connection between the PPP client end and PPP server end is successful. This IP address is optional, and can be gained through the negotiation with the PPP server end.)
Local IP	The local IP address (Used as the IP address of the serial port of the server after the connection between the PPP client end and PPP server end is successful. This IP address is optional, and can be assigned by the PPP server end.)
Local Mask	The local mask.
Request DNS	Request for the DNS server (Whether or not request the IP address of the domain server during the connection to the server end, Yes for request, No for not request.)
Username	The user name to be dialed out (Enter the user name here if authentication is required by the server end to be connected.)
Password	The password to be dialed out (Enter the password here if authentication is required by the server end to be connected.)
CHAP Needed	CHAP is one of the PPP certified protocols. Selecting yes means that this protocol must be used during connection; selecting no means that it is optional.
Free Time	Allowed idle time (The server will disconnect automatically if there is no data transmission in the time period set after the connection is established. The value range of the option is between 0-10000 min. Entering 0 or nothing means automatic disconnection is disabled.)
Modem Init Cmd	The Modem initialization command (To initial the MODEM connected to this serial port, typically "at" is used for the client end.)
Modem Dial Cmd	The Modem dialing command (What dialing mode the MODEM will use: audio or pulse. Type "atdt" for audio dialing (which is the most case in practical applications) and "atdp" for pulse dialing.)
Phone Number1	Dialing out number 1
Phone Number2	Dialing out number 2
Phone Number3	Dialing out number 3

Phone Number4	Dialing out number 4
CallBack	To callback
CallBack Phone	The callback telephone number.
Dynamic Dial	Dynamic dialing

Server Menu

- Server Information
- Serial Port Communication Settings
  - Mode
    - Port1
    - Route Table
    - Host Table
  - Authority Management
  - Users
  - System Stats
  - Reset Ports
  - Save Configurations
  - Reboot Server

### Port 1 Mode Setting

Communication Mode	PPP dialout	Local IP	
Peer IP		Request DNS	no
Local Mask		Password	
Username		Free Time	
CHAP Needed	no	Modem Dial Cmd	
Modem Init Cmd		Phone Number2	
Phone Number1		Phone Number4	
Phone Number3		CallBack Phone	
CallBack	no		
Dynamic Dial	no		

Submit

### PPP daemon

In this mode, each serial port of the server can be used as the dial in/out end of the PPP server, it supports applications of remote dialing access

Communication Mode	Operation mode
Authentication	Authentication mode (Identity authentication is required when accepting the connection from the client end. There are three options: [none], [pap] and [chap]. None represents for no authentication.)
Peer IP Address	Peer IP address (the IP address assigned to the client end)
Local IP Address	Local IP address
Local IP Mask	Subnet mask
Allocate DNS	Allocation of DNS server (Whether or not allocate the IP address of the domain server to the client end during the connection with the client end. Yes for request, No for not request.)
Freetime	Allowed idle time (The server will disconnect automatically if there is no data transmission in the time period set after the connection is established. The value range of the option is between 0-10000 min. Entering 0 or nothing means automatic disconnection is disabled.)
Modem Init Cmd	Modem initialization command
Modem Dial Cmd	Modem dialing command
CallBack	Callback status.
CallBack Phone	The callback telephone number.
CallBack Mode	Callback mode

Server Menu

- Server Information
- Serial Port Communication Settings
  - Mode
    - Port1
    - Route Table
    - Host Table
  - Authority Management
  - Users
  - System Stats
  - Reset Ports
  - Save Configurations
  - Reboot Server

### Port 1 Mode Setting

Communication Mode	PPP daemon	Peer IP Address	
Authentication	none	Local IP Mask	
Local IP Address		Freetime	
Allocate DNS	no	Modem Dial Cmd	
Modem Init Cmd		CallBack Phone	
CallBack	no		
CallBack Mode	local		

Submit

### Line printer daemon (Printer mode)

It is used to connect a printer, and to use the serial server as the printing server. Remote printing is possible through connecting a printer on a serial or parallel port (connected to a device with large number of ports) to the server.

Communication Mode	Operation mode
Sequeue Name	Sequence name
Begin Sequeue	Begin printing sequence (The string sent by the server to the printer to initialize the printer before printing the main text.)
End Sequeue	End printing sequence (The string sent by the server to the printer after the printing of the main text is finished.)
CR As	There are four parameters: [none], [cr], [lf], and [cr-lf]. [none] means that the server will not send an "ENTER" received from a serial port to the Ethernet; [cr] means that the server will send an "ENTER" received from a serial port to the Ethernet just as it is; [lf] means that the server will change an "ENTER" received from a serial port to a "NEW LINE" and then send it to the Ethernet; [cr-lf] means that the server will change an "ENTER" received from a serial port to an "ENTER" and a "NEW LINE" and then send them to the Ethernet.
LF As	There are four parameters: [none], [cr], [lf], and [cr-lf]. [none] means that the server will not send an "ENTER" received from a serial port to the Ethernet; [cr] means that the server will send an "ENTER" received from a serial port to the Ethernet just as it is; [lf] means that the server will change an "ENTER" received from a serial port to a "NEW LINE" and then send it to the Ethernet; [cr-lf] means that the server will change an "ENTER" received from a serial port to an "ENTER" and a "NEW LINE" and then send them to the Ethernet.

**Port 1 Mode Setting**

Communication Mode:

Sequeue Name:

Begin Sequeue:

End Sequeue:

CR As:

LF As:

#### d) Authority Management

Secure Setting	Security settings.
IP Access Limit Table	List of IP access limit.
MAC Access Limit Table	List of MAC access limit.

#### e) System Status

System Information	System information.
Network Interface Information	Network interface information.
Active Routing Information	Active routing information.
Serial Port Information	Serial ports information.
ARP Address Map	ARP address map information.



Information	
TCP Socket Information	TCP socket information.
Active TCP Socket Information	Active TCP socket information.
UDP Socket Information	UDP socket information.

#### **f) Miscellaneous**

Route Table	Routing list.
Host Table	Hosts list.
EA-LAN1 Users	
Select ports to reset	Selection of serial port reset.
Save Configurations	It's very important to save the settings. Any modification to the WEB need to be saved before exiting the web page, otherwise the settings will be restored.
Reboot Server	Restart the server.

## **Chapter Five Troubleshooting of UT-66XX series serial server**

### **a) Can't find the IP address of the serial server after running upgrad.exe**

1. First, make sure that the physical connection is normal, the network cable (distinct crossover cable and straight-through cable) and power supply is connected. Observe the power indicator, the LAN indicator and the ACT (this lamp is off when the 10M network is connected; and it is only on when the 100M network is connected.)
2. Make sure that the network adapter is available and can communicate with other local hosts.
3. Turn off any tools or software that would shield broadcast packets (don't run the system integrated firewall)
4. If after an abnormal disconnection such as power down during IP configuration through a browser, no device can be found, reconfigure IP through the console.

### **b) Unable to open a serial port**

1. Make sure the network status is normal and the server can be pinged through.
2. Check operation status to find out if the port is occupied.
3. If the port is occupied, find out if the settings in "COM PORT OVER TCP/IP" are correct through realport.
4. Delete the corresponding COM port in the registry and remap.

### **c) Can't receive/send data**

1. Make sure that the serial port can be opened normally
2. Find out if the "TX" value in [System Stats]→[ Network Interface Information] is increased. If not, check the connection between the serial port and the upper end network; if TX is increased but the bottom serial port device doesn't receive, check the cable.
3. Find out if the "RX" value in [System Stats]→[ Network Interface Information] is increased. If not, check the connection cable; if yes, check the connection between the serial port and the upper end network.

### **d) Forget the password previously set**

1. Press the "reset" button and hold for 3 s and then release, the password will be eliminated temporarily.

However, the password will be recovered up on the reboot after power down.

**e) Lousy code received/sent**

1. Make sure the cable connection is correct. Specially, problem of parallel cables should be noticed for our 485 devices.
2. Check if the cable length exceeds the standard distance and the cable quality (increasing the transceiver or the optical shutter is also applicable)
3. Make sure the baudrate set matches with the bottom end device
4. Find out if it is possible to receive normal data using network or serial port commissioning assistant without upper end software. If can, the problem might be something with the packing mechanism, set the length and waiting time for the packing in "Serial Port Communication Settings"→"Advanced Setting".

**f) The serial communication server is used as the dialing server and the connection is established normally. But it can't be open by a PC using IE, while inputting the IP in the address bar will do**

1. Whether or not the [Allocate DNS server] in [Specific parameters] of [PPP daemon] of the serial communication server is "Yes", and the DNS set in [Server] is valid.

**g) The serial communication server is used as a dialing server and the connection is established normally. But it can't be open fully or at all when using IE for complicated pages or downloading of large files**

1. Check [Serial ports] in the serial communication settings to make sure that [Flow control] is consistent with the flow control of the MODEM. Typically, the flow control of the MODEM is achieved through rts/cts (hardware flow control)
2. The DCE rate for negotiation between MODEMs is too low, redial.

**h) Unsuccessful PPP connection**

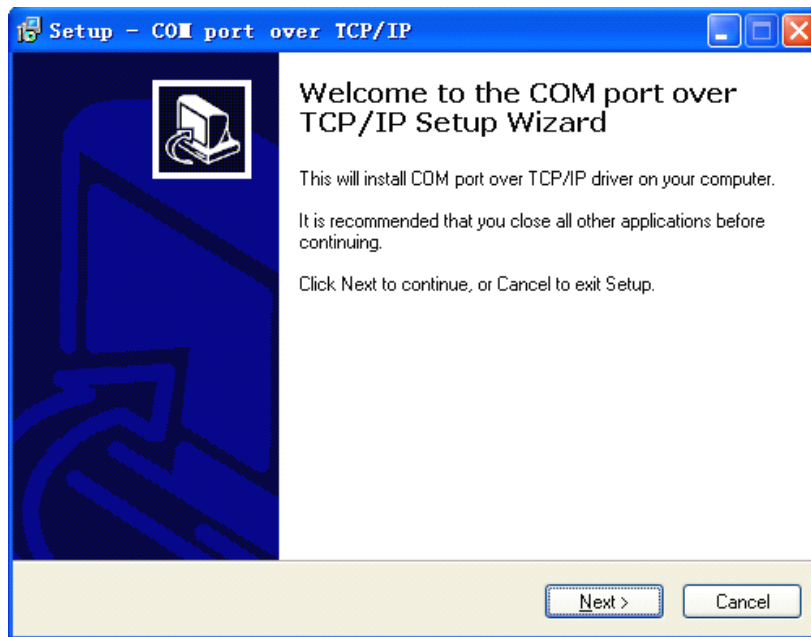
1. Enter into the serial communication server configuration, open [Serial ports] in [Statistics] and find out if the DCD status is '1' (i.e. if the serial DCD signal of the serial communication server is 'high'). If not, the serial communication server will not start PPP
2. Make sure the authentication modes of the client end and the server end are consistent, and the user name and the password established are matched.

**i) Can't be connected as a TCP server**

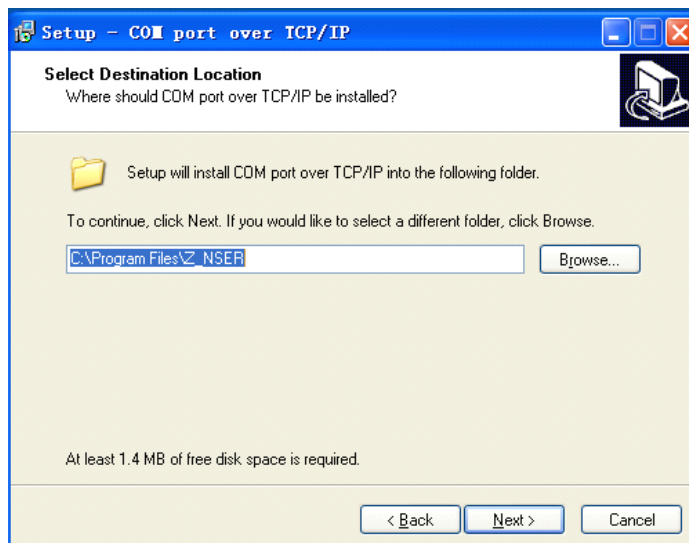
1. Make sure that there is no other PC connected to the corresponding port of the serial communication server. To do this, enter into [Statistics] of the serial communication server, and view [Active TCP information]
2. If [Authentication] in [Specific parameters] is none

If the problem remains unsolved, please contact the manufacturer.

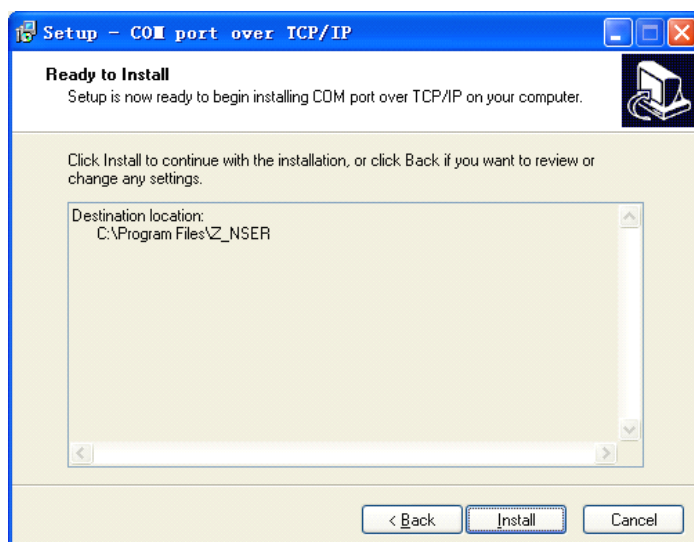




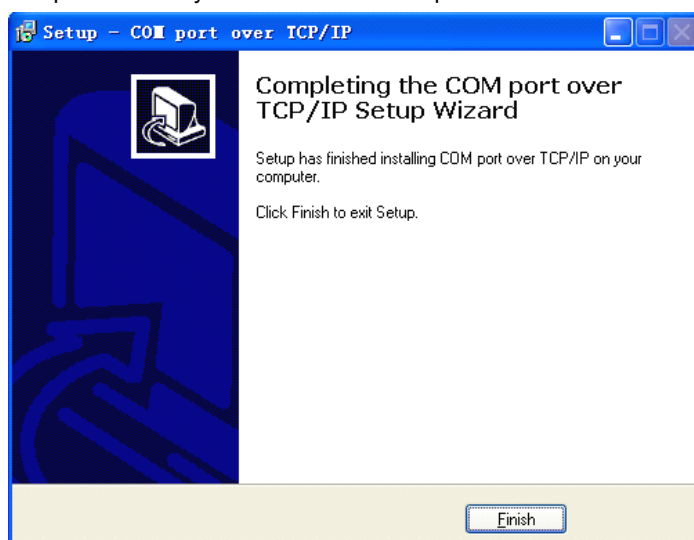
3. In this window you will be noted about where the virtual serial port software is installed. Click “Next” to go to the next step



4. The prompt indicates that the installation is to be started. Click “Install” to go to the next step



5. If this window appears, it means that the virtual serial port software has been installed on your computer normally. Click “Finish” to complete the installation.



### C. Open the virtual serial port software

Run the virtual serial port software through “Start menu – control panel - COM port over TCP/IP”, as shown below. Select the required COM port and click on “Map”, a new window named “Port setting” will pop up, enter the IP address of the serial server, such as 192.168.1.247. Enter 1 for “Device port” (**note that based on what port the multi-port serial server is entered, e.g. enter 5 for the fifth port of an 8-port serial server, and you can also create 8 serial ports at the same time, when you just enter 1-8**); KeepAlive is the active time of the port and the typical setting is 300s; Status Report is typically set to “immediately” for an instant connection. Then click “OK”. Configure other COM ports in the same way. ( **It's very important to press the “Save” button after finishing the required COM ports before you can use the virtual COM ports.** )

